

ATTACHMENT B
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) ~~Static~~ A static generator of compressed hot air for delivery to a cyclically operated utilizing ~~appliances~~ appliance ~~intended for example for operations of heating, sealing or cutting thermoplastic films or sheets, of the type comprising, said generator comprising:~~

~~_____~~ at least one heat source in the form of ~~usually consisting of an electrical resistance controlled by temperature probes (3) to heat a flow of air or other gas under pressure which is forced through the said generator and then directed to the utilizing appliance,~~

~~_____ characterized in that the electrical resistance is housed in a composite body made of a heat conducting material which is a good heat conductor, externally insulated so as not to leak heat into the external environment and machined in any way so that the it composite body comprises internally at least two separate and offset internal channels (4, 5) having identical dimensional characteristics and having essentially equal surface areas of contact with the electrical resistance and having essentially equal coefficients of heat exchange,~~

~~_____ the channels and that are provided with respective inlet ports (112, 113) and with respective outlet ports (118, 119),~~

~~_____ the inlet ports being connectable as required through switching-valve means (16) to the a source (17) supplying the compressed flow of air or other gas for heating,~~

~~_____ while the one of the two discharge outlet~~ ports of the ~~two said~~ channels are connected, ~~one to to~~ the utilizing appliance (21), for example ~~to the sealer, to the thermal conditioning station, to the cutting station or to another cyclically operated utilizing appliance~~ and the other discharge ~~outlet~~ port is connected to an exhaust duct (19) that ends in any position remote from the said-utilizing appliance, ~~the whole in such a way that by supplying one or other of the said channels with the stream of compressed a flow of ambient air or other gas, the compressed forced~~ hot air produced by the generator can be sent to the utilizing appliance or to the said-exhaust duct while maintaining unchanged heat exchange conditions between the electrical resistance and the stream-flow of air or other gas ~~whatever depending on a path the air flows, as a result of owing to the structural identity and to the uniformly distributed offset locations~~ of the said-channels.

2. (Currently Amended) Generator The generator according to claim 1, ~~characterized in that wherein~~ the internal channels (4, 5) of the said-generator, which alternately carry the stream of air to be heated and which prevent direct contact between the air and the electrical resistance, are shaped as adjacent cylindrical helices, like the threads of a two-start screw.

3. (Currently Amended) Generator The generator according to claim 2, ~~characterized in that it comprises~~ further comprising a central body (1) ~~made of for example aluminium or its alloys~~ having one of a cylindrical shape and a round cross section with an axial cavity (2) capable of accommodating at least one preferably

~~armoured~~ electrical resistance, housed adjacent to which there are ~~also~~ temperature probes (3) ~~that~~ which monitor the operation of the generator in relation to predetermined temperature limits, the ~~said~~ body (1) being machine-recessed on ~~the~~ an external lateral surface, in such a way as to be wrapped, like the thread of a two-start screw, by two adjacent channels of cylindrical helical form (4, 5), having identical dimensional characteristics and having equal surface areas and equal coefficients of heat exchange in the direction of the ~~said~~ ~~seat~~ (2) axial cavity with the electrical resistance, the two channels of cylindrical helical form ~~se~~ ~~channels~~ (4, 5) communicating via their respective opposite ends with respective end ducts ~~holes~~ (104, 204 and 105, 205) having identical dimensional characteristics located on ~~the~~ unmachined end portions (101, 201) of the central body (1) and arranged parallel to the axis of ~~this~~ the central body, which is covered externally, ~~for example with slight interference,~~ by ~~a~~ an internal tubular jacket (6) of ~~any~~ a suitable material;_i

 caps (7, 8) being connected in intimate contact on ~~the~~ ends of the ~~said~~ central body (1), the ~~said~~ caps being made of ~~any~~ a suitable heat insulating material or alloy of materials ~~with a high degree of heat insulation and for example machinable by machine tools,~~ and cylindrically shaped, the caps being ~~that are fixed for example by screws (9, 109) or some other suitable method to the ends of a tubular jacket (10) of any suitable material, of a diameter appropriately greater than that of the internal jacket (6),~~ and the a gap (11) between the internal jacket and the external jacket ~~two jackets~~ being occupied by ~~any suitable~~ a heat insulating material ~~with high characteristics of heat insulation,~~ which prevents any leakage of heat to the exterior;_i

_____ one of the said ~~two~~ caps (7) containing a first pair of internal ducts (112, 113), the first pair of internal ducts ~~which on the one hand are connected to the respective end ducts (104, 105) of the said cylindrical helical channels on one end and the internal ducts on the other hand are fixed to the one of two connectors, respectively, the two connectors, the two connectors joined to a respective one of two pipes, the two pipe connected to (12, 13) which, through pipes (14, 15) and a switching-valve means,~~ whereby the first pair of internal ducts ~~(16)~~ can be connected alternately and quickly to a compressed air pipe (17) that supplies the generator with the flow of compressed air or gas at for example room temperature,; and

_____ the opposite a second of the two ~~cap~~caps (8) containing a second pair of internal ducts (118, 119), each of the second pair of internal ducts ~~connected at one respective end to a the respective one of the other end ducts (204, 205) of the said helical channels (4, 5) and, one of the second pair of internal ducts at the other end the duct (119) being connected by a connector to a discharge pipe (19), and the other of the second pair of internal ducts while the duct (118) is connected through one or more connectors (18) to one or more pipes (20) that which supply the working unit or utilizing appliance (21) which ejects the compressed hot air and is characterized by cyclical operation.~~

4. (Currently Amended) Generator The generator according to claim 3, ~~characterized in that~~ wherein at least the internal tubular jacket ~~(6)~~ jackets surrounding the inner central body (1) with the cylindrically helical channels (4, 5) is composed made for example from of stainless steel or other suitable material.

5. (Currently Amended) The generator ~~Generator~~ according to claim 1, ~~characterized in that because there is~~ wherein, due to no leakage of heat, the said generator can be statically located ~~statically~~ in the immediate vicinity of the utilizing appliance (24) and in the immediate vicinity of the a packaging film to be used by the utilizing appliance ~~which the latter is handling~~.

6. (Currently Amended) The generator ~~Generator~~ according to claim 5, ~~characterized in that~~ wherein the said generator ~~may incorporate~~ incorporates the utilizing appliance to which ~~it~~ the generator is supplying the hot air gas.

7. (Currently Amended) The generator ~~Generator~~ according to claim 6, ~~characterized in that~~ wherein the utilizing appliance ~~if it is intended for the formation of a sealer that projects at least one hot air knife onto the overlapping edges of the a film (F) to be sealed, the said generator is oriented at right angles to the said film edges of the film, the caps (8) with the hot air outlet ducts being next to this the -film and having a central upwardly tapering protuberance (108) positioned a short distance away from the film to be sealed and containing at least one straight vertical slit (27) formed by a continuous fissure or by a line of holes, which communicates with an internal chamber (28) inside the said cap (8), the chamber in turn communicating with an end duct the hole (204) connected to the internal helical channel (4) supplying the utilizing appliance, all in such a way that when this internal channel is supplied with the~~

~~compressed a flow of air or another gas, the hot air knife useful in the film (F) heat-sealing operation emerges from the said slit (27).~~

8. (Currently Amended) The generator ~~Generator~~ according to claim 7, characterized in that it ~~further comprising is guided through the an~~ external jacket (10) ~~by having~~ fixed vertical guide means (22) which directly or indirectly support the generator, and _____ ~~to which there is attached, a nut (23) attached to the fixed vertical guide means and engaging with a vertical adjusting screw (24) with an adjusting knob (124) at its bottom end while its top end is connected axially and freely rotatably to a projection (25) integral for example with the external jacket (10), the whole in such a way that~~ _____ ~~whereby by means of the said screw (24) it is possible to precisely adjust the distance between the generator present apparatus and the film to be sealed (F) using the adjusting screw, depending on the characteristics of:~~

_____ (i) ~~this the~~ film,

_____ (ii) a spring (26) being located between the said projection (25) and

_____ (iii) the nut (23),

_____ in order to ~~push force~~ the hot air generator upwards with at least a force approximately equal to the force of the weight of the said generator, in order to facilitate the turning of the said adjusting screw (24).

9. (Currently Amended) The generator ~~Generator~~ according to claim 6, characterized in that if it is intended for wherein the utilizing appliance ~~the formation of~~

comprises a unit for cutting plastic film or sheets, the unit ~~and for this purpose~~ projecting an air pencil or knife at ~~the correct~~ a desired pressure and temperature, the ~~said~~ generator is oriented at right angles to the surface to be cut, the cap (8) with the hot air outlet ducts being next to ~~this~~ the surface to be cut, having an upwardly tapering central protuberance (108) positioned a short distance away from the ~~said~~ surface to be cut and containing a precision-made incision or hole or nozzle which communicates with an internal chamber (28) inside the ~~said~~ cap (8), ~~this~~ the internal chamber in turn communicating with the ~~hole (204)~~ end duct connected to the internal helical channel (4) supplying the utilizing appliance, ~~all in such a way that when this~~ wherein when the internal channel is supplied with forced ~~compressed air or~~ another gas, the ~~hot compressed air~~ knife or pencil useful for cutting ~~the a nearby~~ plastic sheet or film emerges from the ~~said~~ precision-made incision, hole or nozzle.

10. (Currently Amended) ~~Generator~~ The generator according to claim 9, ~~characterized in that it~~ wherein the generator can be used statically for making in-line cuts or in that it can be mounted on simple or complex movement means for making ~~travelling~~ traveling or shaped cuts.

11. (New) The generator of claim 1, wherein the electrical resistance is controlled by temperature probes to heat a flow of air or other gas under pressure which is forced through the generator and then directed to the utilizing appliance.

12. (New) The generator of claim 1, wherein the utilizing appliance, to which the one discharge port of the channels is connected, is selected from the group consisting of a sealer, a thermal conditioning station, and a cutting station.
13. (New) The generator of claim 3, wherein the central body is composed of a material selected from the group consisting of aluminum and its alloys.
14. (New) The generator of claim 3, wherein the caps are fixed by screws to the ends of a tubular jacket.
15. (New) The generator of claim 1, wherein internal channel comprises a helical channel.